

Abstract

Method and apparatus for multi-pass speech recognition. An input device receives spoken input. A processor performs a first pass speech recognition technique on the spoken input and forms first pass results. The first pass results include a number of alternative speech expressions, each having an assigned score related to the certainty that the corresponding expression correctly matches the spoken input. The processor selectively performs a second pass speech recognition technique on the spoken input according to the first pass results. Preferably, the second pass attempts to correctly match the spoken input to only those expressions which were identified during the first pass. Otherwise, if one of the expressions identified by the first pass is assigned a score higher than a predetermined threshold (e.g., 95%), the second pass is not performed. Because the second pass is performed only when necessary, the invention recognizes speech with a faster average speed for a given accuracy in comparison to prior systems. Alternately, the first pass results identify a characteristic of the spoken input. The characteristic can be the gender of the speaker or a type of telephone the speaker is calling from. In which case, the second pass speech recognition technique is selected from a plurality of speech recognition techniques according to the characteristic identified by the first pass. Because the selected second pass technique is specific to the characteristic of the spoken input, the second pass technique can perform speech recognition faster for a given accuracy than a technique which is not specific.